

At page 44, lines 13-32, the paragraph was amended as follows:

The structure of one embodiment of a field emission device is shown in Fig. 10. Referring to Fig. 10, a flat panel display 680 based on field emission devices involves anodes 682 and cathodes 684 spaced a relatively small distance apart. Each electrode pair forms an individually addressable pixel. A phosphor layer 686 is located between each anode 682 and cathode 684. The phosphor layer 686 includes phosphorescent nanoparticles as described above. Phosphorescent particles with a selected emission frequency can be located at a particular addressable location. The particles can be fluorescent particles. The phosphor layer 686 is excited by low velocity electrons travelling from the cathode 684 to the anode 682. Grid electrodes 688 can be used to accelerate and focus the electron beam as well as act as an on/off switch for electrons directed at the phosphor layer 686. An electrically insulating layer is located between anodes 682 and grid electrodes 688. As shown in Fig. 10, the anode should be at least partially transparent to permit transmission of light emitted by phosphor 686.

Claims As Amended

Claims 17-29 have been canceled without prejudice or disclaimer.

The claims have been amended as follows:

5. (Amended) The material of claim 3 wherein the inorganic particles have an average secondary particle diameter less than about 100 nm and the primary particles [generally] having a distribution in sizes such that at least about 95 percent, of the primary particles have a diameter greater than about 40 percent of the average diameter and less than about 160 percent of the average diameter.
11. (Amended) The material of claim 1 wherein the particles are fluorescent particles or phosphorescent particles.

The following new claims have been added.

- 41. (New) The material of claim 3 wherein the inorganic particles have an average primary particle diameter from about 2 nm to about 100 nm.
42. (New) The material of claim 3 wherein the inorganic particles have an average primary particle diameter from about 12 nm to about 50 nm.
43. (New) The material of claim 3 wherein the particles are in an ordered array within at least one of the self-assembled islands.
44. (New) The material of claim 1 wherein the plurality of island are located along different levels relative to a plane within the material.
45. (New) The material of claim 15 wherein effectively no primary particles have a diameter greater than about a factor of four times the average primary particle size.
46. (New) The material of claim 15 wherein the inorganic particles have an average primary particle diameter from about 2 nm to about 50 nm.
47. (New) The material of claim 15 wherein the inorganic particles have an average secondary particle diameter from about 20 nm to about 400 nm.
48. (New) The material of claim 15 wherein the inorganic particles are in an ordered array within the self-assembled formation.

49. (New) The material of claim 15 wherein the self-assembled formation is integrated into an integrated assembly.

50. (New) The material of claim 15 wherein the inorganic particles comprise a metal oxide.

51. (New) The material of claim 15 wherein the inorganic particles comprise a phosphor composition.

52. (New) The material of claim 15 wherein the inorganic particles comprise a material with an index of refraction suitable for transmitting visible light.

53. (New) The material of claim 15 wherein the self-assembled structure has a photonic band gap that prevents propagation of light in any direction.--